be greatest when minimal extraneous electrical signals are present. Successful monitoring will depend on factors such as stage of labor, obesity, gestational age and maternal pushing. In general, failures are more frequent as labor progresses.

Although this method has certain limitations, it may prove useful in antepartum fetal heart rate assessment and in the monitoring of early labor.

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Tumor Immunology

IN THE LAST two decades it has become clear that malignant neoplasms are antigenic and as such they evoke an immune response in the host. This immunological reactivity to a tumor antigen suggests that there may be antibodies or cell mediated effectors to the antigens in the peripheral circulation of patients in whom malignancy is present. If either of these components exists, the possibility of assaying blood for their presence would lead to a diagnostic tool for the detection of malignancy. On the other hand, the human organism that musters an immunological response to carcinoma similar to that seen in infectious diseases can be assisted to the extent that this response may be augmented in the form of therapy (immunotherapy).

Tumor associated antigens have been identified in a host of human neoplasms to date. Purification and isolation of these antigens is currently under investigation with the ultimate goal being a sensitive assay such as a radioimmune assay for diagnostic purposes. Immunotherapy is in its infancy and has taken primarily the route of augmentation of the T cell lymphocytes of the peripheral blood. These T cell lymphocytes are the killer cells of the immunological response and their augmentation to date has been nonspecific in the form of generalized stimulants of the immune system such as bacille Calmette Guérin and Corynebacterium parvum. More specific stimulants await discovery and utilization.

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Treatment of Hyaline Membrane Disease—Update

IN THE LAST ten years remarkable progress has been made in understanding the pathogenesis, intensive therapy and prevention of hyaline membrane disease (HMD). The rational approach to therapy includes the anticipation of and attendance at the delivery of an infant at risk to develop HMD, early and intensive therapy with careful and meticulous monitoring of the infant, and recognition and treatment of complications of the disease. Using this intensive care approach, more than 80 percent of infants with HMD should survive. If such an infant weighs 2,000 grams or more, the survival rate should approach 100 percent.

At present the major area of investigation concerns preventing the disorder. Since HMD is a disorder of immaturity, decreasing the incidence of premature birth will effectively decrease the incidence of HMD. We currently recommend that amniocentesis and the measurement of the lecithin-sphingomyelin ratio in amniotic fluid be done before the delivery of any infant by elective induction or elective cesarian section. [It should be noted that amniocentesis per se is not without risk.—Section Ed.] In those cases where maternal or fetal factors necessitate early delivery, such premises may not be well-founded. For those women who go into labor prematurely and in whom there are no indications to the contrary, an attempt to stop labor should be made with an alcohol drip or with isoxsuprine hydrochloride (Vasodilan®). The mother can then be given 12 mg of dexamethasone twice daily for three days in an attempt to mature precociously the production of pulmonary surfactant.

Theoretically, corticosteroids are taken up by receptor sites in the cytosol and nuclei of fetal lung cells, and the production of lecithin by way of choline incorporation pathway is enhanced. Although additional carefully controlled studies are still needed to further evaluate this form of therapy, early data suggest that corticosteroids given to the mother are of value in decreasing the incidence of HMD in her offspring.

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